Statement for Management

Florissant Fossil Beds National Monument

June 1990

Definition

The Statement for Management (SFM) provides an up-to-date inventory of the park's condition and an analysis of its problems. It does not involve any prescriptive decisions on future management and use of the park, but it provides a format for evaluating conditions and identifying major issues and information voids.

Recommended by: /s/ Noel Poe — 5/22/90
Superintendent — Date
Florissant Fossil Beds National Monument

Approved by: — 6/6/90
Regional Director — Date
Rocky Mountain Region Acting

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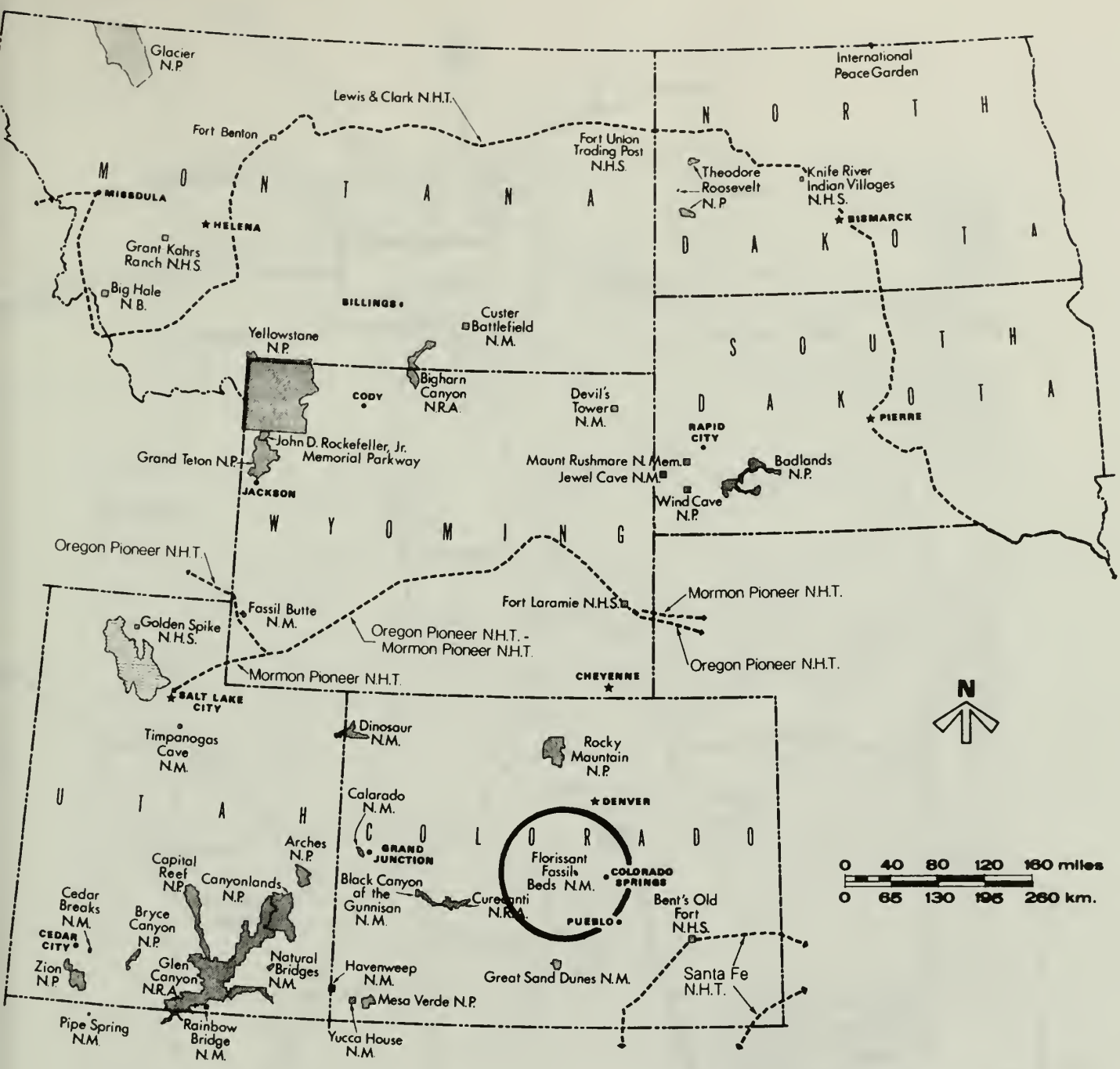

Legend

- Locations of Major Cities
- Locations of State Capitals
- State Boundary Lines
- National Park Service Areas
- ----- National Park Service Historical Trails

ROCKY MOUNTAIN REGION

National Park Service

United States Department of the Interior

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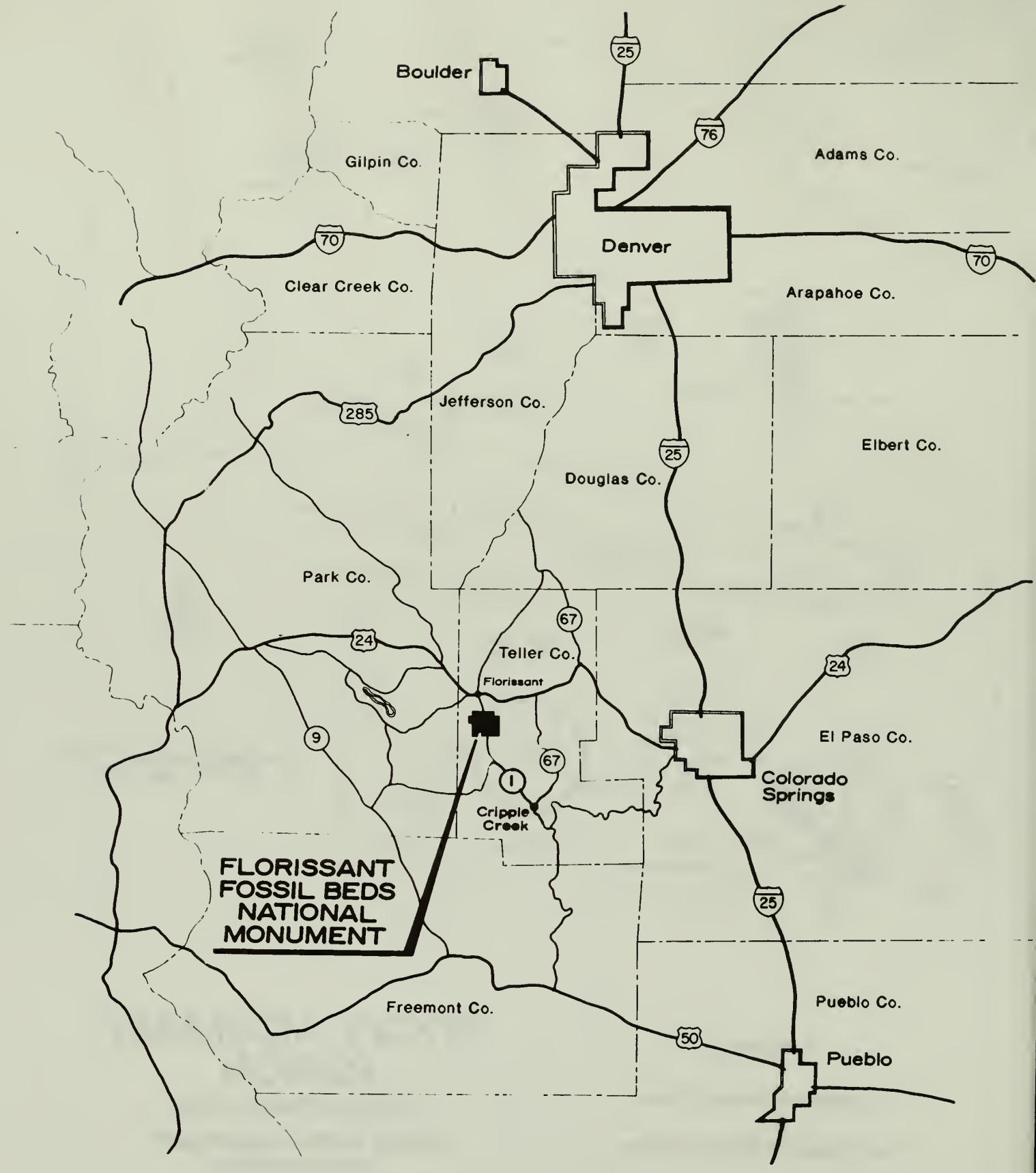

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Florissant Fossil Beds National Monument
Teller County, Colorado

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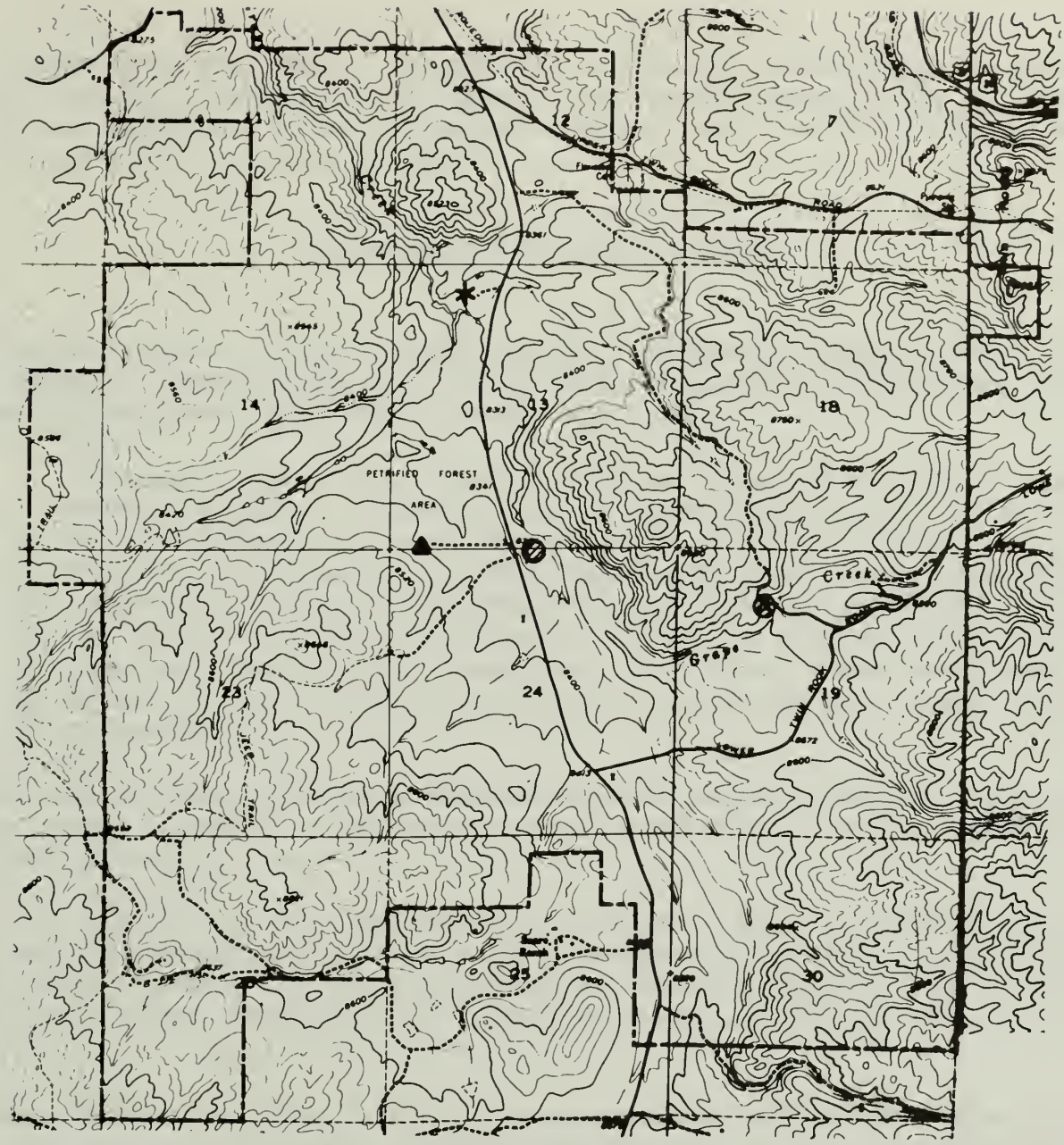

Legend

- National Monument boundary
- ▲ visitor center
- ⊘ maintenance area
- ✱ Hornbeck Homestead

N

0 1/2 1 mile

Boundary Map

Florissant Fossil Beds National Monument

Teller County, Colorado

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Dec. '83	R.M.R.

LOCATION

Florissant Fossil Beds National Monument is located in Teller County in central Colorado. The monument is approximately 35 miles west of Colorado Springs on U.S. Highway 24 and one mile south of the town of Florissant. The monument is within the boundaries of Colorado's Fifth Congressional District.

PURPOSE AND SIGNIFICANCE

During the efforts to get the national monument established and the Florissant shales protected by Federal legislation, members of the Department of Entomology of the American Museum of Natural History wrote a letter stating:

> "Florissant is a magic word known to scientists throughout the world for one of America's treasures. It identifies a site with unparalleled fossil wealth from which has come almost all knowledge of fauna and flora for a great period in our past history, the Oligocene epoch. In this small area preserved in readily available form more species of terrestrial fossils than are known from anywhere else in the world. The Florissant insects are classical fossils that give us deep insight into the evolution of these dominant invertebrates. The area, as a reserve available to a mature scientific community, would continue to bring to light a wealth of new information."

This statement reflects and summarizes the values and concerns, stated throughout the monument's legislative history, that led to the establishment of Florissant Fossil Beds National Monument.

The Act of August 20, 1969, (83 Stat. 101) establishing Florissant Fossil Beds National Monument stated the purpose of the area is "to preserve and interpret for the benefit and enjoyment of present and future generations the excellently preserved insect and leaf fossils and related geologic sites and objects at the Florissant Lakebeds." (See Appendix A.)

Senate Report 91-263, dated June 19, 1969, further defined the intent of the legislation as "...to provide for the protection, controlled collection, and scientific interpretation of the unique insect and leaf fossils and related objects of scientific value, preserved in the ancient Florissant lakebeds, and to provide protection for the scenic resources of the monument area."

The U.S. Congress, in House Report 91-411, dated July 31, 1969, stated the objectives are "...to protect and preserve the fossil resources by adequately controlling their collection in the interest of science and to present them to the public in a manner that will enable the laymen to understand their significance." The House Report also stated that "...a significant portion of this resource remains available for future scientific

exploration,...."

Section 2 of the Originating Act requires that the Secretary of Interior shall administer the monument in accordance with the Organic Act of the National Park Service (39 Stat. 535; 16 U.S.C. 1 *et seq.*), as amended and supplemented. This Act defines the mission of the National Park Service as follows: "to conserve the scenery and the natural and historic objects and the wildlife therein, and to provide for the enjoyment of same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations."

In reference to the management of National Park Service areas, 16 U.S.C. Section 1a-1 further declares "The authorization of activities shall be construed and the protection, management, and administration of these areas shall be conducted in light of the high public value and integrity of the National Park System and shall not be exercised in derogation of the values and purposes for which these various areas have been established, except as may have been or shall be directly and specifically provided by Congress."

Thus the purpose of Florissant Fossil Beds National Monument is the preservation and the interpretation of the paleontological, geological, and scenic resources found within the ancient Florissant lakebeds in a manner that will allow the public to understand and enjoy the monument's resources.

The Florissant shale layers have been a famous collecting ground for scientists since they were discovered in 1874 by Dr. Theodore Mead. The significance of the Florissant fossils is not only the abundance and variety of fossilized insects and vegetative matter, but their immeasurable scientific significance owing to the quality of their preservation.

These natural and paleontological resources are even more significant because of their proximity to the Front Range metropolitan areas. The monument provides excellent opportunities for open-space recreation and appreciation of the monument's scenic resources.

INFLUENCES: INVENTORY AND ANALYSIS

LEGISLATIVE/ ADMINISTRATIVE INVENTORY

Acreage Ceiling

There is a legislative ceiling of 6,000 acres. The actual acreage attained is 5,993.32.

Development Ceiling

Original legislation authorized the expenditure of not more than $3,727,000 for land

acquisition and development. The original estimate was $1,165,000 for land acquisition and $2,562,000 for development. The actual land acquisition costs were $1,940,000, leaving a legislative ceiling balance of $1,787,000 for development. Current estimates for development exceed the legislative ceiling balance. Congressional action is necessary to provide funds for development.

Rights-of-Way

The rights-of-way for the 5.5 miles of county roads traversing the monument were retained by Teller County. These roads are maintained by the Teller County Road Department.

There are two buried water pipelines serving Colorado Springs. One is the Homestake Municipal Waterline traversing the monument from west to east within a 66 foot right-of-way. The second line is the Blue River Pipeline that crosses the northeast corner of the monument. A corridor within the rights-of-way is maintained by the city for patrol and maintenance.

There are two right-of-way permits and one special use permit for buried telephone cables within the monument. The two right-of-way permits are for fiber optic transmission cables. They were issued January 2, 1989 and November 29, 1989, for ten years, with a renewal option. The special use permit was issued in 1974, to provide buried telephone service to the administrative facilities. U.S. West is formalizing a request to upgrade this service in 1990. If a permit is issued, it will be converted to a right-of-way permit.

There is an overhead powerline maintained by Intermountain Rural Electric Association along Teller County Road #1. Another powerline in the eastern part of the monument has been abandoned and is being removed.

Reserved Easements and Estates

Within tract 01-108, there is a reservation for use and occupancy (Nelson) for noncommercial and residential purposes, for a term of 25 years from September 26, 1970, to September 17, 1995, or for the life of the last survivor. There is one residence and a number of outbuildings associated with the reservation. Consideration is being given as to possible utilization of these structures upon expiration of the reservation, but of course any decision is conditional upon access to the structures, to determine their condition. A right-of-way for an access road, 33 feet in width, is reserved for providing ingress and egress to land owned by Nelson outside of, but contiguous to, the monument's boundary.

There is an easement consisting of a 60 foot right-of-way through tract 01-105 (Section 25), as decided during the judgement of stipulation in the purchase of this tract in the south central portion of the monument. This right-of-way along an existing route west of Teller County #1, must be guaranteed for residential and ranching purposes (Snare).

During the purchase of Tract 01-103, a 50 foot right-of-way across the southerly part of the tract in Sections 25 and 30, east of Teller County Road #1, was reserved by the seller (Maytag).

As decided during the judgement of stipulation in the purchase of Tract 01-102, an easement for ingress and egress is guaranteed across S1/2, NW1/4 of Section 11, Township 13 South, Range 71 West. This easement is in the northwest section of the park (Singer).

There is also an ingress and egress reservation from tracts 01-106 and 01-107 to and from the NE1/4, SE1/4 of Section 22. This reservation is for a 25-foot access road right-of-way (Sanborn).

Also reserved is a right-of-way in the southwest corner across the E1/2, SW1/4, Section 26 in Tract 01-109 (Sanborn).

Reserved in a judgement of stipulation in the purchase of Tract 01-121, an easement 60 foot wide along an existing jeep trail, or a route to be determined by the NPS to lands west of the monument boundary. This access is only for residential and ranching purposes (Sanborn).

Jurisdiction

Florissant Fossil Beds National Monument has concurrent jurisdiction. With this authority the United States and the State of Colorado jointly hold and exercise all rights accorded a sovereign, with the broad qualification that such authority is held concurrently. Administrative law regulations, codified under Title 36, Code of Federal Regulations (36 CFR), have been promulgated under the provisions of statutes codified in Title 16, United States Code. Enforcement of regulations is usually handled by Teller County Sheriff, Colorado Division of Wildlife (wildlife infractions), or a law enforcement commissioned park ranger.

Air Quality

The State of Colorado, under the auspices of the Clean Air Act, has designated Florissant Fossil Beds National Monument as Category II, which parallels the Federal designations in the Clean Air Act, as amended August 1977 (42 U.S.C. § 7401 *et seq.*).

Cultural Resources

In accordance with the intent of the National Historic Preservation Act of 1966 (16 U.S.C. § 470 *et seq.*), Executive Order 11593, "Protection and Enhancement of the Cultural Environment", and NPS management policies, the structures within the monument have been inventoried. The Hornbek Homestead is on the National Register of Historic Places.

Section 106 of the "National Historic Preservation Act of 1966, as amended" requires that impacts that might affect the integrity of cultural resources must be assessed before an action begins. This includes action on adjacent or contiguous lands if that action involves the character of the cultural site.

The Archeological Resources Protection Act (16 U.S.C § 470 aa) requires the Federal land manager to protect the archeological resources within the monument.

Fire Agreements

The monument has signed cooperative structural and wildland fire agreements with the Four-Mile Emergency Services, Inc. and with Teller County Sheriff, Colorado State Forest Service and Pike and San Isabel National Forests. Activities covered by these agreements include fire prevention and control.

Other

There is a variety of other public laws and National Park Service policies and regulations that affect management decisions relating to the use and protection of park resources. A few of these include state wildlife laws, Endangered Species Act, regulations relating to commercial or private use of the monument, Bald Eagle Act, and Colorado water laws.

RESOURCES

Landscape and Vegetation Characteristics

The monument lies within the eastern slope of the Rocky Mountains at an elevation of 8,200 feet to 8,800 feet in the Montane Life Zone. The park is characterized by mountain meadows interspersed with open grassy forests of ponderosa pine and dense forest stands of Douglas Fir and Blue Spruce on the hilltops and the steeper slopes. Aspen trees are restricted to moist drainages usually on the north slopes. Meadows occupy most of the area that falls within the limits of the prehistoric Florissant lakebed. The basin is visually dominated by the 14,110-foot-high Pike's Peak, approximately 18 miles east of the monument.

The Colorado Native Plant Society has collected and identified 443 species of plants from 88 Families and 308 Genera. Specimens are in the monument's herbarium at the Pike's Peak Research Station. Several exotic species of vegetation exist because of the intensive agricultural activities that occurred before 1969.

Paleontology

To understand and appreciate the fossil resources of the monument, one must also understand and appreciate the dynamic change between today's environment as opposed to the one 35 million years ago. It is also important to know the natural processes that were significant in bringing about the change.

The elevation of the area during the Oligocene period ranged between 2,500 and 3,000 feet. The environment can be described as falling somewhere between that of the low, cool coastal valleys by Big Sur, California, and the drier highlands of northern Mexico. The area contained groves of 300-foot-tall sequoias, a lush undergrowth of vegetation, mixed hardwood and softwood forests, more arid highlands, mammals such as small

horses and pig-like oreodonts, a wide variety of insects, and streams and a lake containing aquatic life forms.

As a series of volcanic actions began, a drastic change in the environment occurred, which led to the existence of the vast paleontological resources of the monument. The volcanic action caused mudflows and ash fall that buried and preserved the various forms of life.

Today, beneath these gently rolling meadow lands, a delicate fossil handwriting--an ancient calligraphy--is imprinted on the Oligocene shales. Incredibly detailed fossils of insects and vegetation exist in such profusion that the Florissant Fossil Beds form one of the better fossil assemblages in the world.

Though the fossils can be seen only in displays at the visitor center, giant petrified tree stumps, which were excavated prior to the establishment of the monument, can be viewed by visitors touring the area.

The discovery of the fossil bearing shales has been credited to Dr. A.C. Peale of the U.S. Geological Survey in 1874, although Theodore Mead found them a year earlier and shipped 23 fossils back east for study. Since then, scientists from around the world have dug into the shales and removed over 80,000 specimens, identifying more that 1,100 species of insects including almost all the Oligocene fossil butterflies of the New World, over 140 plant species, and several species of fish, birds, and small mammals.

Soils

The soils of the area are characterized by decomposed granite and alluvial materials. There are outcroppings of Pike's Peak Granite. The soil has poor cohesive qualities and erodes easily once the surface vegetation is disturbed. An Order 3 Soil Survey of the monument was completed by the Soil Conservation Service in 1986.

Water Resources

The monument receives an average of 15 inches of precipitation per year. Most of the moisture comes during the short summer thunderstorms. Snowfall is generally light, seldom accumulating more than a foot.

There are several springs and seeps scattered throughout the monument. The few perennial streams are extremely small. Grape Creek is the major drainage in the area and drains the monument from the south to the northwest.

It is believed that water from these springs and streams comes from rainfall percolating through the soil from the higher ground that is privately owned around the monument. The water quality of these surface flows appears to vary, based on whether the water surfaces from the shale or granite layers.

Thirty-four soil erosion check dams were built in the 1950s on most drainages within the

monument to control erosion. Six dams permanently impound water but cause no significant downstream hazards.

Water from wells drilled into the Florissant Basin has high iron oxide and manganese concentration, often times unfit for human consumption. The current visitor center is served by a 450-foot well that produces a sustained flow of four-gallons-per-minute.

Air Quality

The air quality of Florissant Fossil Beds National Monument is considered very good and subject to Class II Air Quality state standards. Even though the major populations of Colorado Springs, Pueblo, and Denver are only 25, 50 and 60 miles from the area respectively, there is no visual indication that these metropolitan areas effect the quality of air at the monument. The increasing use of wood-burning stoves in private developments adjacent to the monument and increased use of automobiles within the monument could have an impact of the air quality over the long term.

Climate

The area experiences wide, daily and yearly variations in temperature. Temperatures range from -35 degrees Fahrenheit in the winter to 90 degrees Fahrenheit in the summer. Winters are harsh and cold, with potential rapid temperature fluctuations. Summers are generally pleasant, with moderately low humidity.

Winds are normally from the west and may attain velocities as high as 35 to 40 miles per hour in the summer. Winds have reached 70 miles per hour in the winter.

Global climatic changes due to ozone depletion, the greenhouse effect or acid rain, will have a significant impact on the monument's resources.

Wildlife

Large mammal species commonly found in the monument are elk, deer, antelope, an occasional black bear, bobcats, and coyotes. Mountain lions are typical within the general region. Small animals include beavers, porcupines, badgers, rabbits, weasels, squirrels, prairie dogs, gophers, chipmunks, bats, mice and over 100 species of birds, including golden eagles. Bald eagles and peregrine falcons have been sighted in the summer. There are numerous insect species.

During the winter there is a movement of elk from the Pike's Peak area toward the monument. The increases in elk herd populations are causing increased winter and year-long utilization of the monument.

Historic Resources

Material recovered from archeological sites within the monument indicate that there was human occupation from approximately 8000 B.C. until 1200 A.D. The sites are not

extensive and are considered to have been occupied seasonally. The cultural gap between the Woodland Occupation (1200 A.D.) and Anglo occupation may yet be filled.

Starting in the 1870s and through the mid-1900s, the area was settled and used for agricultural purposes. Farmers grazed cattle on the open range and cultivated hay, potatoes, oats, and some garden vegetables on small parcels. A few buildings from this era remain.

Starting in 1887, excursion trains from Colorado Springs brought tourists into Florissant during the summer to collect fossils and wildflower bouquets. This recreational use continued until the Colorado Midland Railroad was abandoned in 1918.

In 1890, when gold was discovered in Cripple Creek 15 miles south of the monument, the wagon road between Florissant and Cripple Creek became a major transportation route. (This road is now Teller County #1.) At one time, there were 15 six-horse passenger stagecoaches daily between Florissant and Cripple Creek and more than 8,000 pounds of freight was shipped daily to the gold fields. Later railroad lines were built into Cripple Creek and this road became less important for transportation.

During the early 1900s, as the significance of the fossils became apparent, a small movement fought to have the area protected as a state or national park. Meanwhile local entrepreneurs developed tourist facilities to exploit the fossils. One of the more notable commercial ventures was the "Pike Petrified Forest" located at the site of the visitor center. Another visitor facility was the "Colorado Petrified Forest" located north of the visitor center near the "Big Stump".

Refer to Appendix B for a list of classified structures within the monument. The Hornbek House is the only structure determined to be eligible for nomination to the National Register of Historic Places and was entered on the Register on December 8, 1981.

LAND USES AND TRENDS

The monument is surrounded by privately owned lands. Over the last few years grazing and agricultural uses have given way to subdivision developments. With improved highway access from Florissant to Colorado Springs, the once summer-home cabins are being replaced by year-long residences.

Potential impacts on the monument's resources from these contiguous lands are: further land subdivision, logging, contamination of water sources, urban encroachments, reduction of wildlife habitat, loss or disruption of wildlife migration routes, wildland fires, unauthorized trails, trespass livestock grazing, unrestrained pets and harassment of wildlife, illegal recreational machine use in the monument, use of dead trees for firewood, firearms practice and poaching of wildlife.

Within a few miles on all sides of the monument there is public land administered by the United States Forest Service (Pike and San Isabel National Forests), Mueller State Park, Eleven Mile State Recreation Area, and Dome Rock State Wildlife Area. The National

Forest's and State Park's emphasis is primarily on providing recreational opportunities. The wildlife area is managed to preserve wildlife habitat.

Mueller State Park is scheduled to be opened for public use in 1991. Construction has started on a 100-site campground and picnic areas. Concession facilities, visitor center, and administrative facilities will also be constructed. Several miles of hiking and mountain bike trails will be available.

On the west boundary of the monument, there is a large, privately owned recreational camp consisting of approximately 6,000 acres. This camp provides outdoor environmental education opportunities and research facilities to a national and international audience.

The City of Cripple Creek, a registered National Historic Landmark 15 miles south of the Fossil Beds, is a significant tourist attraction. A large majority of the monument's visitors also visit Cripple Creek during the same trip. The city of Victor, another gold mining town south of Cripple Creek, has entered the tourism business and is also attracting a large number of visitors.

In 1989, the Bureau of Land Management (BLM), in cooperation with the State, designated three routes as "Gold Belt Tours" under the State Historic Byways Program. These three gravel roads follow the once popular mining transportation routes from the Pueblo/Canon City area to Cripple Creek and Victor. The BLM and State Parks Division are jointly developing major visitor opportunities in the Arkansas Headwaters State Recreation Area to the west and south of the monument.

Other regional visitor destination points include Pike's Peak, Royal Gorge, Air Force Academy, Garden of the Gods, Cave of the Winds, Seven Falls, Eleven Mile Canyon, the South Platte River, several guest ranches and youth camps, and the resort towns of Colorado Springs, Manitou Springs and Woodland Park.

Teller County, particularly in the vicinity of Woodland Park, is becoming a "bedroom community" of Colorado Springs. The number of people who commute out of the county for employment remains high. The number of individuals living below the recognized poverty level remains high. The development of a sound economic base is critical to the future of Teller County. To this end, the Teller County Economic Development Commission, Tourism Council, Chambers of Commerce, and other organizations are developing and promoting the recreational opportunities in the county.

VISITOR USE ANALYSIS

Along the east slope of the Front Range is the growing metropolitan area that extends from Cheyenne, Wyoming, on the north, to Pueblo, Colorado, on the south. This area has more than two million people within a relatively short driving distance of Florissant Fossil Beds National Monument.

Major U.S. and State highways lead to the park from the Interstate arteries of I-25 (35 miles east) and I-70 (95 miles north). There is a major commercial airport serving the Colorado Springs area.

Seasons of Use

During 1989, 73 percent (118,689) of the yearly visitation recreation use arrived at the monument during June, July, August, and September. More significantly, however, 45 percent (73,433 visits) of the yearly use occurred during July and August. This trend is similar to the two previous years. (See Visitation Graphs.)

It is interesting to compare the above figures with the period from 1976 through 1981. At that time, 77 percent of the average yearly use occurred during the four summer months and 50 percent of the use occurred during July and August. This reflects opinions by the park staff that the visitor use is increasing in the "shoulder" months.

As the popularity of the "Fall Foliage Tours" has grown during the last few years, more people are visiting the monument in September and the first of October. In 1989, 25,868 visitors arrived in September compared to 19,388 in June.

Visitor Trends

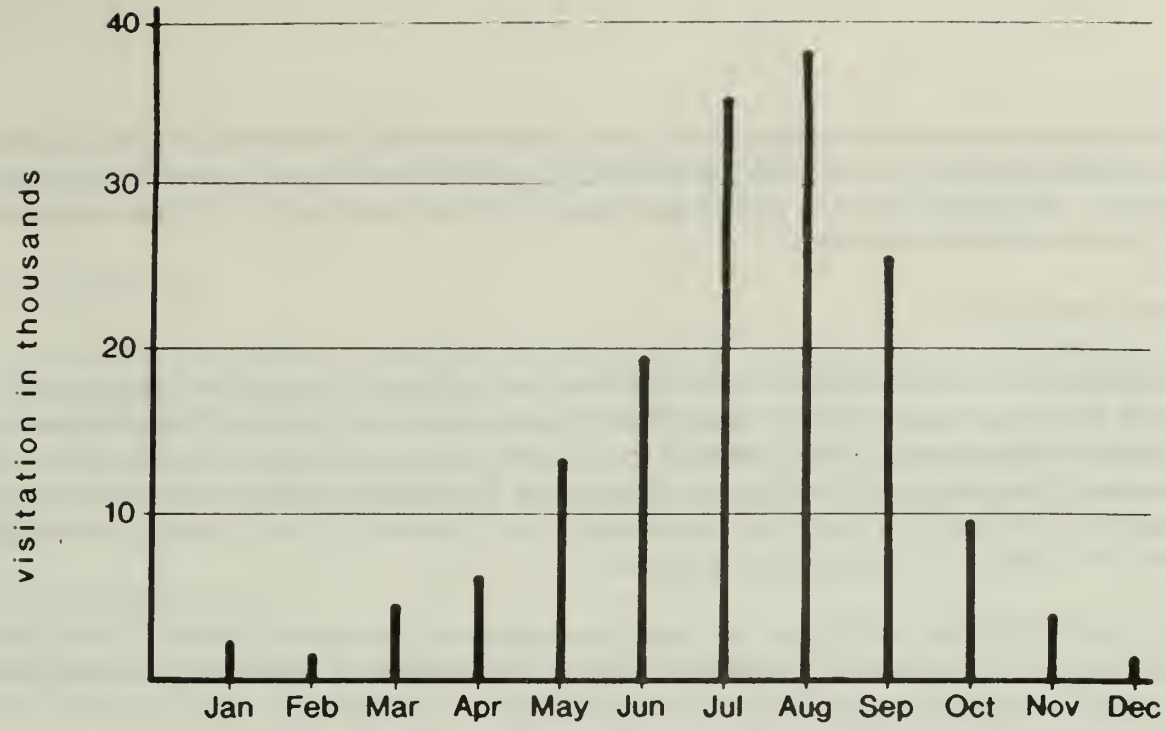
Visitation during the 12 years from 1973 through 1984 averaged 48,000. In 1984, 54,800 visits were reported. In 1989, the visitation exploded to 161,740. Visitors are counted as they enter the door of the visitor center. This method of counting has remained consistent since pre-1984.

The rapid increase in visitation is apparently due to the increased recreational opportunities in Teller County, involvement of the park staff in tourism-promoting organizations, the formation of an environmental education program, increase in on-site and off-site interpretative programs, increased regional and national publicity by the media, and assistance by the local communities in promoting the Fossil Beds.

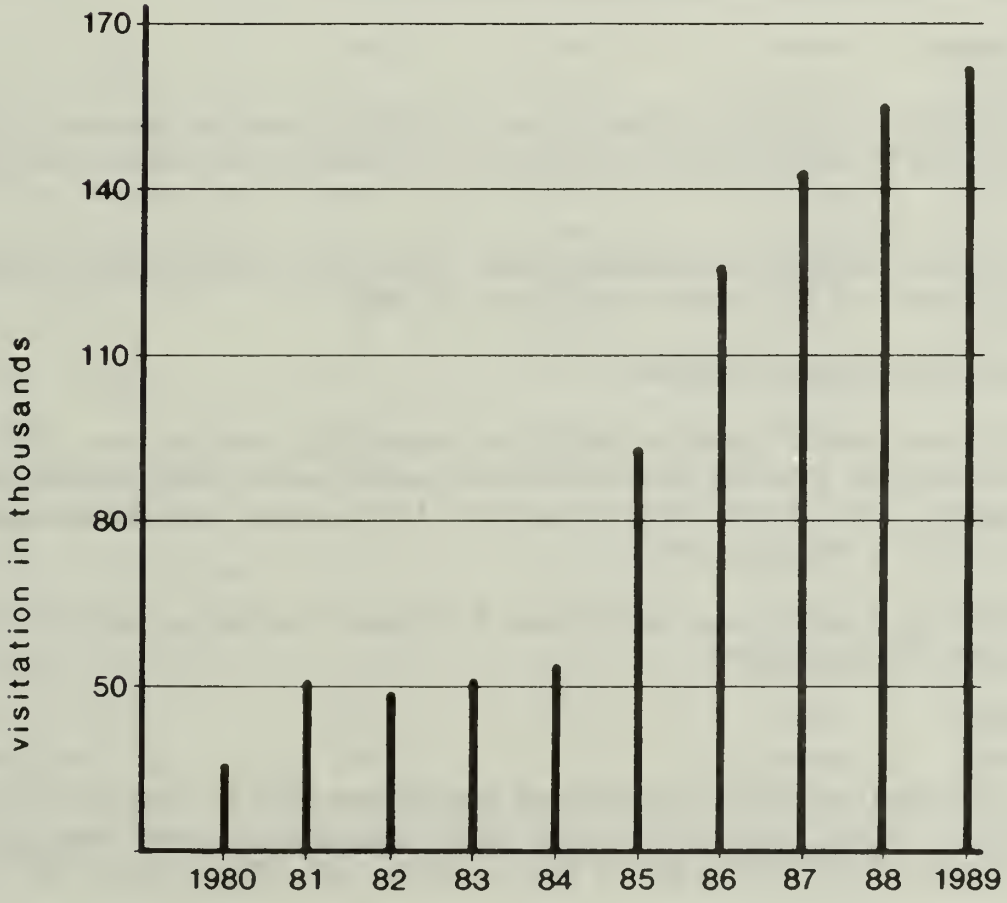
The temporary park facilities are inadequate for the increased visitation. The centralization of trailheads, picnic area, and parking in the visitor center area is increasing the congestion to a point that visitors are discouraged from using the monument during busy summer days.

Visitor use at Florissant Fossil Beds is day-use, with an average length of stay of approximately 3.0 hours. The length of stay has increased over the last five years due to more interpretive activities, additional hiking trails, and increased picnicking use.

Visitation at the monument is expected to continue a high rate of increase (greater than 5 percent annually). Contributing factors for this increase will be the opening of Mueller State Park, the increased recreational opportunities along the Arkansas River, a major effort by the Cripple Creek/Victor businesses to attract visitors, publicity about Teller County by the South-Central Tourism Council and the State Tourism Council, construction



Monthly Visitation – 1989



Annual Visitation
Florissant Fossil Beds National Monument

of a national motel in Woodland Park, and the increasing interest by county businesses in promoting recreation. Finally the intent by the NPS to construct new visitor facilities has created additional interest in the monument. The construction of new facilities will drastically increase visitation.

Demographics

The park has not been able to fund a formal demographic study of the park visitors. The latest in-house study (1980) stated that 14 percent of the visitation was weekend use. Twenty-seven percent of the visitors were from Colorado, 25 percent came from Texas, Kansas, Missouri, and Oklahoma; 45 percent from other states; and 3 percent from foreign countries. The 1980 survey revealed that 85 percent of the Colorado visitors came from the Denver/Colorado Springs area.

The park staff feels that there has been some shift in the above figures. There appears to be a significant number of people coming back as repeat visitors and staying longer.

Summary of Interpretive Activities

Refer to Appendix C for a summary of the 1989 interpretive activities.

FACILITIES AND EQUIPMENT ANALYSIS

Roads and Trails

The park road system includes 2.1 miles of road. All of the roads are gavelled. (There are 5.8 miles of County roads within the monument. 5.3 miles are scheduled to be paved in 1990.)

The monument has 10.8 miles of developed trails. Three more miles of trail on the east side of the monument will be opened in the Spring of 1990.

Non-historic Buildings and Facilities

There are four non-historic buildings within the monument, including one A-Frame structure that is used for a residence in the summer and for environmental education in the spring and fall. The visitor center consists of 1,600 square feet divided equally between administrative and visitor use.

In addition, there are 2 picnic areas with a total of 12 sites. The Barksdale Picnic Area was opened in the Spring of 1990.

Utility Systems

Electricity is purchased from Intermountain Rural Electric Association. Telephone service is provided by U.S. West. Water for the visitor center comes from a deep well and the non-culinary water for the A-Frame comes from a shallow well. Potable water for the A-

Frame must be hauled into the building. Sewage and waste water at the visitor center and A-Frame is treated with a septic tank and leach field. There have been problems with the visitor center's septic tank not functioning properly during the heavy use season.

Historic Structures

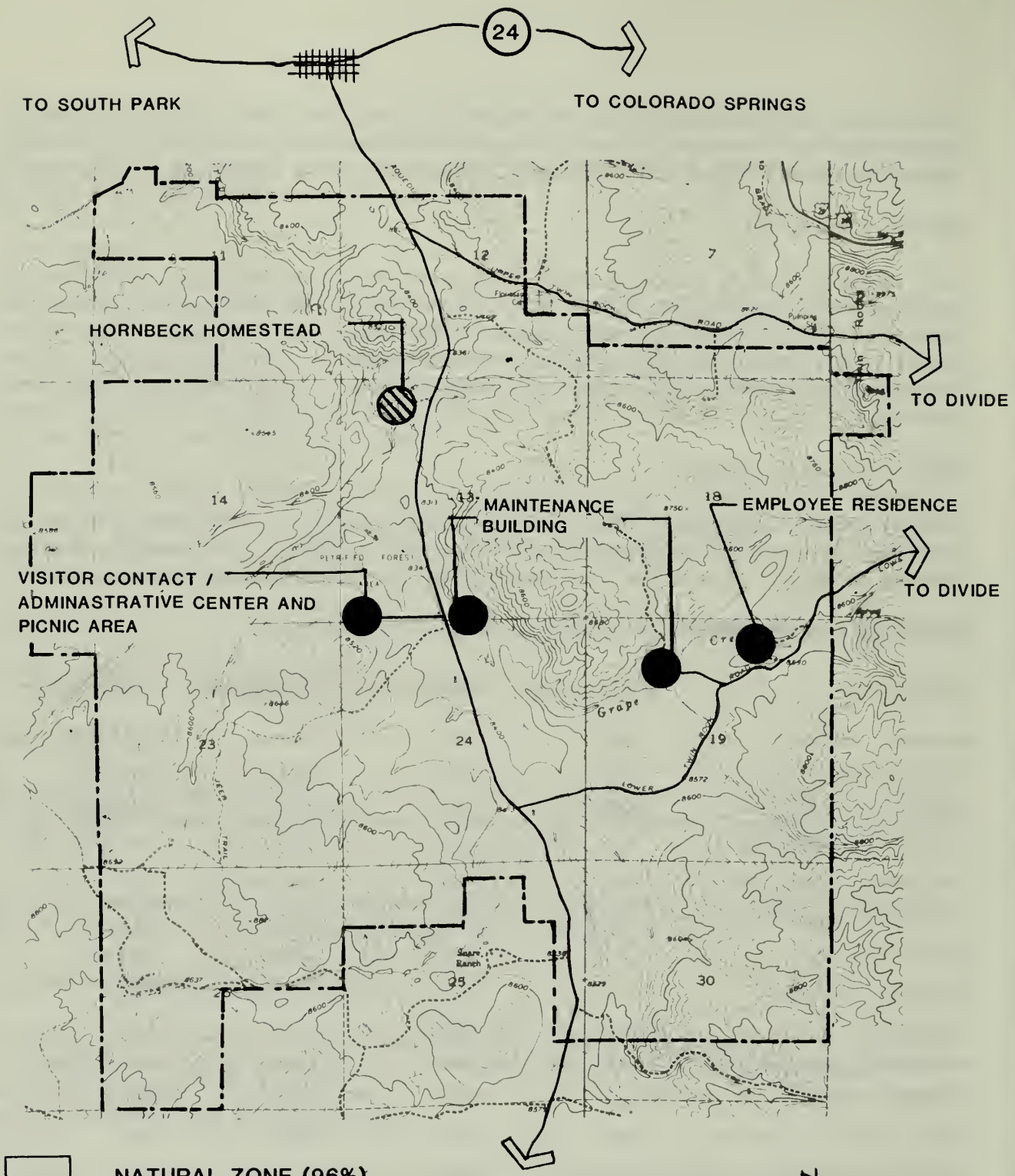
Refer to Appendix B for a list of classified structures within the monument. The Hornbek House is the only structure determined to be eligible for nomination to the National Register of Historic Places and was entered on the Register on December 8, 1981. The Hornbek Complex is in need of substantial restoration to bring all structures up to standard. The complex may be eligible for inclusion to the National Register as a Cultural Landscape.

Major Equipment Owned

The monument owns one 5-yard dump truck, one 1-1/2 ton flat bed truck, a backhoe/front end Case, Model 480C; a 1954 Model Ford tractor, and a sedan. See the Property Inventory on file at the park headquarters for complete listing of equipment.

STATUS OF PLANNING

Plan/Study	Preparer	Approved	Adequacy	Repository
Gen. Mgmnt. Plan & DCP	RMRO	9/85	Adequate	Park/RMRO
Design Analysis for VC/Admin. Bldg	DSC	11/89	Current	Park/DSC
Plants of FLFO	PPRS	1/90	Current	Park/PPRS
Natural Resource Management Plan	Park	8/83	Being revised	Park/RMRO
Cultural Resource Management Plan	Park	1/84	Being revised	Park
Loss Control Management Plan	Park	6/89	Current	Park
Interpretive Prospectus	HFC	6/89	Current	Park/HFC
Statement for Interpretation	Park	1/90	Rev.Annually	Park
Uniform Policy	Park	4/89	Current	Park
Information Management Plan	Park	8/89	Current	Park
Affirmative Action Plan	Park	2/89	Current	Park
Emrgncy Opratns Plan/Panic Binder	Park	1/89	Current	Park
Park Compendium	Park	4/89	Current	Park
Hist. Resrce Stdy & Hist. Furn. Stdy	RMRO	1/79	Adequate	Park/RMRO
Stratigraphic Survey	DSC	6/83	Adequate	Park/RMRO
Archeological Survey	MWAC	11/74	Adequate	Park/RMRO
Soil Survey	SCS	9/86	Adequate	Park
Vegetation Mapping	PPRS	/86	Adequate	Park/PPRS



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EXISTING MANAGEMENT ZONING

FLORISSANT FOSSIL BEDS NATIONAL MONUMENT , COLORADO

UNITED STATES DEPTARTMENT OF THE INTERIOR - NATIONAL PARK SERVICE

EXISTING MANAGEMENT ZONING

The 1985 General Management Plan identified the management zones within the monument. Approximately 97 percent of the 5,992 acres within Florissant Fossil Beds National Monument are classified as Natural Zone. Approximately 1 acre (0.1 percent) is a Historic Zone. The remaining 2.9 percent of the lands are classified as Development Zone. (See Existing Management Zoning Map.)

Natural Zone

The zone encompasses the larger portion of the monument, which includes the ancient Lake Florissant lakebed portions within the boundaries of the monument. This zone is managed to preserve and interpret the unique geologic, scenic, and other natural resources. The resources and processes will remain largely unaltered by human activity.

Park Development Zone

Within this zone are areas where the visitor use is concentrated. It contains the county roads, visitor center/administrative buildings, maintenance facilities, picnic areas, residence, related parking areas and utilities. This zone is managed to support non-historic park development and intensive public use that substantially alters the natural environment.

Historic Zone

The Historic Zone is confined to the Hornbek Homestead Complex (Homesteaded in 1878). This zone is managed to preserve, protect and interpret these agricultural and ranching resources of the 1800s.

MAJOR ISSUES AND CONCERNS

Although there are many issues/concerns pertaining to the management of the monument, only those most timely, controversial, or basic are listed here.

DEVELOPMENT NEEDS

The existing visitor center/administrative building is a renovated farmhouse that was moved on site in 1926. It has an inadequate foundation and is subject to the heaving and subsiding of the soil during the seasonal changes. The building has been modified several times by the previous owner and the National Park Service.

There are 1,600 square feet of floor space in the building, divided approximately in half between visitor center and administration.

There are only two paleontological exhibits inside the visitor center. Both provide some information, but little interpretation. The park has built exhibits on the porch and outdoor free-standing exhibits in an attempt to interpret the park resources. The park's visitation has increased threefold since 1984. The visitor center space is insufficient to accommodate the visiting public.

All of the visitor facilities and trailheads are at the visitor center. Thus the area around the development is heavily congested and impacted while the majority of the park receives little use.

With a 1989 staff of 5 permanent employees, 19 paid temporary employees and 27 volunteers, the 800 square feet of administrative space was grossly inadequate. In the fall 1989, the park received a surplus 14x66 foot trailer from the Bureau of Reclamation and converted the trailer to administrative space. This action helps to address the shortage of space on a temporary basis, but does not solve the need.

Other park facilities are also too small. The maintenance facility is a 1920 barn. The 1,300 square feet on the ground floor has been converted to three rooms. The shop is too small to get a vehicle indoors to work on it.

There is no housing in the park for permanent employees and only one small A-Frame for temporary employees. Seasonal housing in the community is nearly non-existent and expensive.

In Fiscal Year 1989, the U.S. Congress appropriated $410,000 for planning new facilities at the park. In the spring of 1990, the Regional Director approved the preliminary design for a 9,700 square foot visitor center/administrative, other associated visitor facilities, a maintenance area, and housing area. The plans for the new facilities have a priority of 64 on the Fiscal Year 1991 Servicewide Construction Project List.

The concern now is how to protect the resources and provide for the ever-increasing public use of the monument while waiting for the construction priority to reach a level to be funded.

LAND PROTECTION AND ADJACENT LAND ISSUES

With the adoption of the Zoning Resolution by the Board of Teller County Commissioners in 1973, the county designated a National Monument Protective Zone (NP). The intent of this zone is to prevent encroachment on the monument, to protect the views from and to the monument and to create a visually pleasant environment.

The NP was originally proposed as a blanket zone 200 yards around the border of the monument and 400 yards along roads entering the monument. When adopted, the zone as it applied to roads entering the monument, was reduced to a distance of 1/4 mile and to a depth of 200 yards on either side of the road right-of-way.

While the NP Zone provides substantial protection for the scenic resources along the roads entering the monument, it does not protect the monument's resources from impacts caused by incompatible development adjacent to the boundary.

The proliferation of boundary developments is causing or has the potential to cause unwanted impacts to the monument's resources. Natural elk migration routes are being blocked or altered. Hunter access to migrating elk herds is being further restricted by private landowners. Substantial cutting of trees or altering of natural land forms for homesites may impact scenic views from within the monument. Likewise, construction materials and the siting of homes may have the same adverse impacts. Unrestrained pets have harassed wildlife. The collection of down or standing trees for firewood removes that energy source from the ecosystem.

The cutting of the boundary fence, unauthorized trails, and illegal recreational machine use have occurred and are accelerating. With more development, the possibility of contaminated water sources or the lowering of the water table may affect the water quality within the monument. The potential exists for the introduction of non-native vegetation and wildlife.

Adverse impacts to the scenic and other resource values may also occur from development by utility companies. These impacts may occur with the placement of water, power, telephone and other utility rights-of-way within the monument or immediately adjacent to the boundary.

Mitigation of these impacts ranges from expressing the above concerns to the local landowners, developers, community organizations, and the county, to application of formal county guidelines, not to prohibit development, but to guide the development in a way that is compatible with the Teller County Growth Management Plan and the visual qualities associated with the natural landscape in western Teller County.

Approximately 30 percent of the prehistoric lakebed is protected within the national monument. Within the area outside the monument are extensive fossil-bearing shale layers. If these layers are destroyed by development, considerable information about the Oligocene environment may be lost.

It is not practical nor desirable for all of the fossil-bearing strata to be included within the monument. However, it may be appropriate for selected sites of quality paleontological resources to be included in the monument. In order for this to occur there would need to be a formal paleontological survey completed, a boundary expansion study with public input, and the passage of Federal legislation authorizing an increase in acreage.

It might be feasible to ask, or even require through zoning regulations, that if a substantial fossil deposit is found during development of private land, that a paleontologist be called in to conduct an investigation. The monument could assist in identifying a qualified paleontologist who could perform this work. Under current funding, financial support from the monument is not available to assist in paying for the paleontological consulting services on private lands. By using a paleontologist to perform work on private lands, at

least some of the data could be recorded and not lost.

STAFFING AND BUDGET

While the lack of adequate staffing and budget is a concern at most National Park Service sites, it has reached a critical stage at Florissant Fossil Beds. The Fiscal Year 1989 budget dedicated 87 percent of its base budget to funding personnel salaries and benefits. This left little discretionary funding available for supplies and materials, contracted services, utilities, or vehicle expenses.

Even though visitation has increased threefold since 1984, the base budget has increased 9.3 percent from $185,300 in 1984 to $202,600 in 1989. If it wasn't for cyclic, repair/rehab money or other "soft" funding sources and the contributions of numerous volunteers, the staff couldn't provide the minimal visitor services or resource protection that it is providing today.

With the pending new visitor facilities, there must be a corresponding increase in the base budget to properly staff the facility, accommodate the increased visitor demands for interpretive and other services, and provide for increased maintenance costs. Historically, an increase in the base budget is not automatically provided with new facilities.

LACK OF DATA REGARDING PARK RESOURCES OR PROPER CARE OF RESOURCES

Certain data is lacking, which would greatly aid in managing the paleontological, cultural and natural resources of Florissant Fossil Beds National Monument. The Status of Planning section indicates some of this void, e.g. obsolete natural and cultural resource management plans. The 1990 draft Resource Management Plan has nine project statements addressing the lack of adequate baseline resource data.

Inadequate paleontological information, incomplete park collections inventory and knowledge of off-site paleontological collections, and missing substantial inventory and monitoring data on wildlife populations, vegetation, threatened and endangered species, water, and air resources are all areas lacking in data. As the staff collects data, they need to be able to properly manage information in a Geographic Information System or similar large-scale data base management program.

In addition, the lack of adequate funding to protect the paleontological resources is a major concern. The petrified Sequoia stumps continue to be exposed to the weather. This increases their rate of deterioration. The fossil collection and other artifacts are stored without any climatical controls. The construction package will resolve these issues by constructing stump shelters over the more severely fractured stumps and by including a curatorial storage room in the visitor center. However, until these structures are completed, the deterioration continues.

NATURAL LAND FORMS AND NON-NATIVE VEGETATION MANAGEMENT

Since the settlement of this region, man has greatly altered the natural land forms of the area. The acreage within the monument has been extensively used for agricultural purposes since the mid-1800s. Historic disturbances include logging, fire suppression, grazing, crop cultivation, and commercial excavation of fossils. Heavy cattle grazing in the late 1800s and early 1900s reduced the plant cover and created sheet and gully erosion.

There are 34 erosion control dams, one built across each drainage and miles of terraces constructed to collect moisture and hold the soil. Non-native grass seed has been used extensively to re-vegetate utility rights-of-way, abandoned fields, and other places.

With the removal of the last grazing permit in 1984, the grass community is re-establishing itself. Some gullies are slowly being re-vegetated. Ponderosa pine forests are invading the open meadows. However, direct restoration or manipulation by resource managers will be necessary on some sites, i.e. major gullies, unused roads, borrow pits, old development sites, and areas with substantial plantings of non-native vegetation.

Staff members have several concerns about the vegetative processes that are occurring. Is the invasion of the forests a "natural" process because this land was once forested, or is it because wildfires have been eliminated for many years? There is little evidence that forests are invading the prehistoric lakebed, but will this occur in the future and destroy the "historic scene?" With the re-establishment of the grass and forests, are the terraces and check dams necessary? Research is necessary to develop an acceptable plan to manage the natural landform and non-native vegetative processes.

WILDLIFE MANAGEMENT

With nearly 6,000 acres of non-developed land, there is considerable wildlife habitat within the monument ranging from riparian wetlands to wind-swept, rocky, ponderosa pine-covered ridges. While there are definite gaps in the inventorying and monitoring of the wildlife resources, the changes in elk population are obvious.

According to reports, ten years ago it was uncommon to see an elk herd. Today elk make widespread use of the monument as winter range and it appears that one herd spends most of the year in or near the monument.

In 1988, 1989, and 1990, the National Park Service and the Colorado Division of Wildlife have monitored the movement of elk on the west side of Pike's Peak. It appears the elk population is increasing and typical hunting seasons are not having an impact.

It is a concern that if the elk population continues to expand at the present rate and increased development retards or adversely changes the migration routes to the summer

range on Pike's Peak, that the population within the park could reach the carrying capacity of the park and adjoining ranges. At this point, unacceptable damage to vegetation and massive dieoffs due to starvation or disease would likely occur.

MANAGEMENT OBJECTIVES

This listing of management objectives does not preempt the long-term objectives stated in the General Management Plan but charts shorter-range targets for park management.

Work with the Regional Office, Denver Service Center, Harper Ferry Center, the public, and support organizations to finish the planning for and, when money is appropriated, the construction of new visitor facilities, maintenance area, and housing area.

Plan a strategy for increasing the base budget and staff to adequately staff and maintain the new facilities.

Complete the Resource Management Plan and establish a course to implement the recommendations to solve the needs of the project statements. Paramount is securing an adequate data base and in-depth understanding of the monument's resources.

Enhance and maintain a functioning and reliable network for information and exchange with the local communities, local governments, State and Federal agencies to articulate positions, share in cooperative ventures, and to assure to the extent possible that uses and developments of adjacent lands are compatible with preserving the monument's scenic and other resources.

Establish a Trail Plan that will improve existing trails and explore other trail options that will reduce the congestion at the visitor center and enhance the visitor use and enjoyment of the monument.

Assist the Friends of Florissant Fossil Beds, Inc. with getting firmly established and with developing a long-range strategy for assisting the monument in a way that addresses the needs of park management and the visitor.

APPENDIXES

Public Law 91-60
91st Congress, S. 912
August 20, 1969

An Act

To provide for the establishment of the Florissant Fossil Beds National Monument in the State of Colorado.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That, in order to preserve and interpret for the benefit and enjoyment of present and future generations the excellently preserved insect and leaf fossils and related geologic sites and objects at the Florissant lakebeds, the Secretary of the Interior may acquire by donation, purchase with donated or appropriated funds, or exchange such land and interests in land in Teller County, Colorado, as he may designate from the lands shown on the map entitled "Proposed Florissant Fossil Beds National Monument", numbered NM-FFB-7100, and dated March 1967, and more particularly described by metes and bounds in an attachment to that map, not exceeding, however, six thousand acres thereof, for the purpose of establishing the Florissant Fossil Beds National Monument. Florissant Fossil Beds National Monument, Colo. Establishment. 83 STAT. 101 83 STAT. 102

SEC. 2. The Secretary of the Interior shall administer the property acquired pursuant to section 1 of this Act as the Florissant Fossil Beds National Monument in accordance with the Act entitled "An Act to establish a National Park Service, and for other purposes," approved August 25, 1916 (39 Stat. 535; 16 U.S.C. 1 et seq.), as amended and supplemented.

SEC. 3. There are authorized to be appropriated such sums, but not more than $3,727,000, as may be necessary for the acquisition of lands and interests in land for the Florissant Fossil Beds National Monument and for necessary development expenses in connection therewith. Appropriation.

Approved August 20, 1969.

LEGISLATIVE HISTORY:

HOUSE REPORT No. 91-411 (Comm. on Interior & Insular Affairs).
SENATE REPORT No. 91-293 (Comm. on Interior & Insular Affairs).
CONGRESSIONAL RECORD, Vol. 115 (1969):
June 20: Considered and passed Senate.
Aug. 4: Considered and passed House, amended.
Aug. 7: Senate concurred in House amendments.

GPO 37-139

APPENDIX A

LIST OF CLASSIFIED STRUCTURES

FLORISSANT FOSSIL BEDS NATIONAL MONUMENT

HORNBEK HOUSE

LCS No. 1410-10492.
Log residence built in 1878.
Management Category B - Should be preserved.
Entered on the National Register on 12/08/81.

HORNBEK ROOT CELLAR

LCS No. 1410-10495.
Earth and Log dug out cellar built 1870s.
Management Category B - Should be preserved.
Rehabilitated 1979.

MAYTAG BUNKHOUSE

LCS No. 1410-10497.
Moved to the Hornbek Homestead in 1976.
Log building.
Management Category C - May be preserved.

MAYTAG RANCH BARN

LCS No. 1410-10496.
Locally referred to as the "Red Barn."
Wood building with loft.
Management Category C - May be preserved.

APPENDIX B

SUMMARY OF 1989 INTERPRETIVE ACTIVITIES

The following summarizes the 1989 interpretive program:

Personal Services at FLFO:

	# of Programs	# of Contacts
Talks and Walks	1,294	38,265
Mini-Field Seminars	32	1,025
Roving	daily	12,444
Hornbek Homestead	daily	12,144
	1,326	63,878

Environmental Education Programs

	# of Programs	# of Contacts
Summer Programs at FLFO	74	3,269
School-year Programs (on site)	128	6,420
School-year Programs (off site)	134	6,218
Community Groups (off site)	34	3,814
Senior Citizen Programs (off site)	15	487
Fairs	6	10,414
	391	30,622

National Park Service Interpretive Services offered at USFS areas:

	# of Programs	# of Contacts
Campfire Programs (off site)	38	1,852
Guided Walks (off site)	24	416
Roving	--	9,078
	62	11,346

VIP HOURS:

Administration	10
Research	684
Interpretation	6,970
Maintenance	299
	7,963

APPENDIX C